



**CYBERSECURITY EDUCATION  
AND RESEARCH  
COMPUTER SCIENCE DEPARTMENT**

[www.cs.bowiestate.edu/cnis](http://www.cs.bowiestate.edu/cnis)

UNDERGRADUATE COURSES

**Undergraduate Courses**

- ◆ Foundations of Computer and Network Security
- ◆ Principles of Intrusion Detection and Prevention Systems
- ◆ Fundamentals of Cryptography & Applications
- ◆ Operating Systems and Software Security
- ◆ Case Studies in Computer Security

GRADUATE COURSES

**Graduate Courses**

- ◆ Advanced Wireless/ Mobile Security
- ◆ Applied Cryptography
- ◆ Information Assurance
- ◆ Software Assurance

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**BSU is a designated National Center of Academic Excellence in Information Assurance and Cyber Defense Education.**

**This designation is bestowed by the Department of Home Land Security and the National Security Agency .**

The Department of Computer Science offers the following degrees:

**BS— Computer Technology in Computer & Network Security.**

**BS—Computer Science with a security focus.**

*“We are seeking to be an exemplar in education, research and training for students”*

DEPARTMENT  
OF  
COMPUTER SCIENCE

# Emerging Technologies

## CYBERSECURITY PROJECTS

### Over \$6 million in cumulative funding from our partners:

- Department of Defense (DoD)
- Department of Homeland Security (DHS)
- Department of Energy (DoE)
- National Science Foundation (NSF)
- Army Research Office (ARO)

- ◆ Equipping students with secure coding techniques via the Cybersecurity Workforce Pipeline Consortium, DoE
- ◆ Addressing the Shortage and Quality of Cybersecurity Workers through Relevant and Dynamic Training, DoE
- ◆ LUCID: A Spectator Targeted Visualization System to Broaden Participation at Cyber Defense Competitions, NSF
- ◆ Designing a Robust Closed-loop Intrusion Detection Predictive Model Using Signal Processing Techniques, DoD
- ◆ Resource Efficient Multi-source Authentication with Split-Join One-Way Key Chain for Wireless Ad Hoc Networks, ARO

## LABORATORIES AND CENTERS

- ◆ Center for Cybersecurity and Emerging Technologies (C2ET).
- ◆ The Laboratory for Information and Infrastructure Security and Assurance (LIISA) - a cybersecurity instructional lab.
- ◆ Cybersecurity & Forensics Research Laboratory. Currently analyzing the SWAMP tool-set for possible use in code development in the COSC classrooms.
- ◆ Laboratory for Security Research.

## CYBERSECURITY RESEARCH

- ◆ Face Biometrics (Facial Recognition)
- ◆ Speech Biometrics (Speech Recognition)
- ◆ Authentication
- ◆ Network Security
- ◆ Data Privacy and Security
- ◆ Malware Detection, Analysis and Mitigation
- ◆ Cyber Forensics
- ◆ Cybersecurity Education



## A Center of Academic Excellence in Cyber Defense Education

**The Department of Computer Science offers undergraduate students, who qualify, one of two certificates recognizing their achievement in cyber defense education.**

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